

WHAT IS CLAIMED IS:

1 1. A depolarization method comprising the step of selectively exposing a portion of a
2 fabrication tool to a plasma for a selected time interval wherein said selected time interval
3 has a duration sufficient to reduce a polarization of said portion of said fabrication tool
4 whereby interference with a motion of a device being processed by said fabrication tool is
5 not observed.

1 2. The method of claim 1 wherein said step of selectively exposing said portion of said
2 fabrication tool includes selecting for exposing said portion of said fabrication tool at
3 preselected intervals of time, and exposing said structure if interference with said motion of
4 said device is observed.

1 3. The method of claim 2 further comprising the step of detecting said interference with
2 said motion of said device.

1 4. The method of claim 3 wherein said step of detecting said interference with said
2 motion comprises step of detecting a misalignment of said device with respect to said portion
3 of said fabrication tool.

1 5. The method of claim 1 wherein said portion of said fabrication tool comprises an
2 insulating pad.

1 6. The method of claim 1 wherein said plasma comprises a plasma formed from a noble
2 gas.

1 7. The method of claim 6 wherein said noble gas is selected from the group consisting
2 of xenon and argon.

1 8. The method of claim 1 further comprising the step of generating said plasma with a
2 plasma flood gun.

1 9. The method of claim 8 wherein said plasma flood gun includes an arc discharge.

1 10. The method of claim 9 wherein said arc discharge is struck between a hot filament
2 cathode and an anode.

1 11. The method of claim 10 wherein said arc discharge has a voltage drop between said
2 cathode and said anode of between ten and thirty volts.

1 12. The method of claim 8 wherein said step of exposing said portion of said fabrication
2 tool comprises the step of positioning said portion of said fabrication tool in proximity to an
3 aperture of said plasma flood gun.

1 13. The method of claim 1 wherein said preselected time interval is preselected from the
2 range of five to ten minutes.

- 1 14. A depolarization process comprising the steps of:
2 positioning an insulating pad in proximity to an aperture of a plasma flood gun
3 (PFG);
4 and exposing said insulating pad to a plasma from said PFG for a selected interval
5 of time wherein said selected interval of time has a duration sufficient to reduce a
6 polarization of said structure whereby interference with a motion of a device supported on
7 said insulating pad is not observed.
- 1 15. The process of claim 14 wherein said plasma is formed from a noble gas.
- 1 16. The process of claim 15 wherein said noble gas is selected from a group consisting
2 of xenon and argon.
- 1 17. The process of claim 14 further comprising the step of generating said plasma by
2 striking an arc discharge in a gas supplied to said PFG.

1 18. A depolarization method comprising the step of selectively exposing a portion of a
2 fabrication tool to a plasma for a selected time interval.

1 19. The method of claim 18 wherein said step of selectively exposing a said portion of
2 said fabrication tool includes exposing said portion of said portion of said fabrication tool
3 if interference with a motion of a device being processed in said fabrication tool is observed.

1 20. The method of claim 18 wherein said plasma comprises a plasma formed from a
2 noble gas.

1 21. The method of claim 18 further comprising the step of generating said plasma with
2 a plasma flood gun.

1 22. The method of claim 18 wherein said portion of said fabrication tool comprises an
2 insulating pad.

1 23. The process of claim 19 wherein said interference with said motion of said device is
2 indicated by a misalignment of said device with respect to said portion of said fabrication
3 tool.

1 24. The process of claim 18 wherein said portion of said fabrication tool is in a vacuum
2 region of said fabrication tool.